Refine Search

Search Results -

Terms	Documents
705/1	5008

Database:
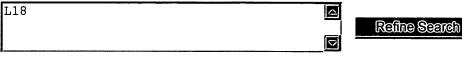
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L18

[Refine Search]

[Recall Text ⬍]   [Clear]   [Interrupt]

Search History

DATE: Thursday, September 02, 2004   Printable Copy   Create Case

Set Name	Query	Hit Count	Set Name
side by side			result set
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L18	705/1	5008	L18
L17	110 and (database or data with base)	37	L17
L16	707/100	5066	L16
L15	707.clas.	22253	L15
L14	705/27	2208	L14
L13	705/26	4921	L13
L12	705/39	1636	L12
L11	L10 and (rules or rule)	45	L11
L10	L9 and behavior	55	L10
L9	auction.ti.ab.	2214	L9
L8	L7 and (rule or rules)	44	L8
L7	L6 and (compare or compar$ or inform$ or information)	56	L7
L6	(auction near behavior or bid$ near behavior)	62	L6
L5	L3 and (rule or rules)	34	L5

L4	L3 and compar$ near2 inform$	0	L4
L3	L2 and (auction near behavior or bid$ near behavior)	40	L3
L2	705.clas.	28812	L2
L1	705/37	2207	L1

END OF SEARCH HISTORY

        L11: Entry 37 of 45   File: USPT   Dec 24, 2002

US-PAT-NO: 6499018
DOCUMENT-IDENTIFIER: US 6499018 B1

TITLE: Method and system for controlling bidding in electronic auctions using
bidder-specific bid limitations

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY
Alaia; Marc   Glenshaw   PA

Becker; David J.   Sewickley   PA

Kinney, Jr.; Sam E.   Sewickley   PA

Rago; Vincent F.   Pittsburgh   PA

Rupp; William D.   Pittsburgh   PA

ASSIGNEE-INFORMATION:
NAME   CITY   STATE   ZIP CODE   COUNTRY   TYPE CODE
FreeMarkets, Inc. Pittsburgh   PA   02

APPL-NO: 09/ 311558   [PALM]
DATE FILED: May 14, 1999

PARENT-CASE:
This is a divisional of copending application Ser. No. 09/252,790 filed on Feb. 19,
1999, which claims priority of provisional applications No. 60/101,141, filed on
Sep. 18, 1998, and Ser. No. 60/110,846, filed on Dec. 4, 1998.

INT-CL: [07] G06 F 15/30

US-CL-ISSUED: 705/37; 705/26, 705/27, 705/1
US-CL-CURRENT: 705/37; 705/1, 705/26, 705/27

FIELD-OF-SEARCH: 705/37, 705/26, 705/27, 705/1

PRIOR-ART-DISCLOSED:

                        U.S. PATENT DOCUMENTS

                ▐ Search Selected ▌   ▐ Search ALL ▌   ▐ Clear ▌

        PAT-NO   ISSUE-DATE   PATENTEE-NAME   US-CL
    ☐   3581072   May 1971   Nymeyer   235/152

☐	4674044	June 1987	Kalmus et al.	364/408
☐	4789928	December 1988	Fujisaki	364/401
☐	4845625	July 1989	Stannard	364/407
☐	4992940	February 1991	Dworkin	364/401
☐	5136501	August 1992	Silverman et al.	364/408
☐	5193056	March 1993	Boes	364/408
☐	5243515	September 1993	Lee	364/401
☐	5297032	March 1994	Trojan et al.	364/408
☐	5375055	December 1994	Togher et al.	364/408
☐	5394324	February 1995	Clearwater	364/402
☐	5402336	March 1995	Spiegelhoff et al.	364/401
☐	5606602	February 1997	Johnson et al.	379/115
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☐	5715402	February 1998	Popolo	705/37
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☐	5758327	May 1998	Gardner et al.	705/26
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☐	5794207	August 1998	Walker et al.	705/23
☐	5794219	August 1998	Brown	705/37
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☐	5905974	May 1999	Fraser et al.	705/37
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ART-UNIT: 3624

PRIMARY-EXAMINER: Millin; Vincent

ASSISTANT-EXAMINER: Patel; Jagdish N

ATTY-AGENT-FIRM: Morgan, Lewis & Bockius LLP

ABSTRACT:

A method and system for conducting electronic auctions is described. A dynamic lot closing extension feature avoids collisions in closing times of multiple lots by dynamically extending the closing time of a subsequent lot if a preceding lot's closing time is extended to be too close to the subsequent lot's then-currently

scheduled closing time. Scheduled closing times can be extended with a flexible overtime feature, in which the properties of the event triggering the extension and the duration of the overtime period(s) can be tailored to a particular auction, particular lots of products within an auction, and to the particular time within an auction process. The bidding status of a lot can be set to a "pending" status after the nominal closing time for submission of bids to allow bidders to alert the auction coordinator of technical problems in submission of bids. This allows the possibility for a lot to be return to open status for further bidding by all bidders. The auction may be paused by the auction coordinator to correct technical, market and miscellaneous problems that may arise during the course of an auction. Individual bid ceilings can be set for each bidder so that they are required to bid lower than certain thresholds determined in advance of the auction. Failsafe error detection is performed to prevent erroneous bids from entering the auction. The auction coordinator has the ability to override any erroneous bids that are entered to prevent prejudice to the auction.

45 Claims, 22 Drawing figures

L11: Entry 44 of 45   File: USPT   Apr 25, 2000

US-PAT-NO: 6055518
DOCUMENT-IDENTIFIER: US 6055518 A

TITLE: Secure auction systems

DATE-ISSUED: April 25, 2000

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Franklin; Matthew K.	New York	NY		
Reiter; Michael K.	Raritan	NJ		

ASSIGNEE-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
AT&T Corporation	New York	NY			02

APPL-NO: 08/ 745717   [PALM]
DATE FILED: November 12, 1996

PARENT-CASE:
This application claims the benefit of Provisional Application No. 60/010,993 filed
Feb. 1, 1996.

INT-CL: [07] G06 F 19/00, H04 L 9/00

US-CL-ISSUED: 705/37; 705/64, 705/67
US-CL-CURRENT: 705/37; 705/64, 705/67

FIELD-OF-SEARCH: 705/37, 705/64, 705/67, 380/4, 380/21, 380/23, 380/25, 380/30,
380/33

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

▐ Search Selected ▌ ▐ Search ALL ▌ ▐ Clear ▌

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	5511121	April 1996	Yacobi	380/24
☐	5625692	April 1997	Herzberg et al.	380/21
☐	5668878	September 1997	Brands	380/30

☐   <u>5708714</u>   January 1998   Lopez et al.   380/25

☐   <u>5749785</u>   May 1998   Rossides   463/25

ART-UNIT: 275

PRIMARY-EXAMINER: MacDonald; Allen R.

ASSISTANT-EXAMINER: Caudle; Penny

ATTY-AGENT-FIRM: Kenyon & Kenyon

ABSTRACT:

The apparatus and method of the present invention provide secure auction service
for use in a network having servers and bidding terminals. The auction service
makes transactions among servers and bidding terminals subject to a distributed
protocol. The distributed protocol distributes submitted bids among the multiple
servers, closes a bidding period, verifies validity of monetary value of each
submitted bid by utilizing said distributed protocol and determines a winning
bidder.

17 Claims, 5 Drawing figures

        L11: Entry 44 of 45   File: USPT   Apr 25, 2000

DOCUMENT-IDENTIFIER: US 6055518 A
TITLE: Secure auction systems

Brief Summary Text (5):
One example of financial vehicles is a sealed-bid auction. The sealed-bid auction
is one in which secret bids are issued for an advertised item, and once the bidding
period closes, the bids are opened and the winner is determined according to some
publicly known rule (e.g., the highest bidder wins). Sealed-bid auctions are used,
for example, in the auctioning of mineral rights to U.S. government-owned land, in
the sale of artwork and real estate, and in the auctioning of government
procurement contracts.

Brief Summary Text (11):
The secure auction system of the present invention provides an interface or bidding
terminals by which clients or bidders can issue secret bids to the auction servers
for an advertised auction. Once the bidding period is closed, the auction service
opens the bids, determines the winning bid, and provides the winning bidder with a
ticket for claiming the item bid upon. Using novel cryptographic techniques, the
secure auction system is constructed to provide strong protection for both the
auction house and correct bidders, despite the malicious behavior of any number of
bidders and fewer than one-third of the servers comprising the secired auction
system. Specifically, it is guaranteed that (i) bids of correct bidders are not
revealed until after the bidding period has ended, (ii) the auction house collects
payment for the winning bid, (iii) losing bidders forfeit no money, and (iv) only
the winning bidder can collect the item.

Detailed Description Text (5):
A sealed-auction typically consists of two phases of execution. The first is a
bidding period, during which many bidding terminals B.sub.1, B.sub.2, B.sub.3 and
B.sub.n can submit arbitrarily many sealed bids to auction server group . At some
point the bidding period is closed, thus initiating the second phase in which the
bids are opened by server group and the winner is determined and possibly
announced. The rule by which the winner is determined can be any publicly known,
deterministic rule. The deterministic rule, for example, dictates that the highest
bidder be chosen the winner.

Detailed Description Text (6):
There are numerous possibilities for corruption and misbehavior in the sealed-bid
auction. Possibly the most difficult to counter are those that involve the
misbehavior of insiders in charge of executing and overseeing auction server group
110 (e.g., employees of the auction house), especially when this behavior involves
collaboration with certain bidders at bidding terminals B.sub.1, B.sub.2, B.sub.3
and B.sub.n. Below are several examples of behavior that could yield an improper
auction, many of which may be very feasible in a naive electronic implementation of
auctions: (1) Prior to the close of the bidding period, an insider having access to
server group opens submitted bids and informs a collaborator of their amounts so
the collaborator at one of bidding terminals B.sub.1, B.sub.2, B.sub.3 and B.sub.n
can submit a bid for the minimum amount needed to win the auction; (2) an insider
in control of server group manipulates the closing time of the bidding period. For
example, the insider attempts to prematurely close the bidding period in an effort

to exclude some bids; (3) bids for one auction are diverted to a second auction with an earlier closing time, causing their amounts to be revealed prematurely to an insider at server group ; (4) after the close of the bidding period, a bidder at one of bidding terminals B.sub.1, B.sub.2, B.sub.3 and B.sub.n arranges to withdraw a bid or insert a bid, in collaboration with an insider at server group ; (5) an insider having control of server group awards the auction item to someone other than the winning bidder (and goes undetected because bids are not made public); (6) an insider at server group collects payment from losing bidders (e.g., by informing each that it won), or collects payment from the winning bidder but fails to provide the means for that bidder to obtain the item bid upon; and (7) the winning bidder refuses to pay the auction house (e.g., by disclaiming the bid or claiming that it lacks sufficient funds).

Detailed Description Text (8):
Secure auction system 100 of the present invention prevents the above behaviors and most other "attacks" on auctions, despite the malicious behavior of arbitrarily many bidders and fewer than one-third of the auction servers comprising the service. We would find a process (bidder, server, etc.) to be correct if the process always follows the specified protocols. We describe the properties provided by secure auction system 100 in two categories, namely Validity properties and Secrecy properties.

Detailed Description Text (9):
The Validity properties include the following conditions. The bidding period eventually closes, but only after correct auction server group decides that it should be closed. There is at most one winning bid per auction, dictated by the (deterministic) publicly-known rule applied to the well-formed bids received before the end of the bidding period. The auction server group collects payment from the winning bidder equal to the amount of the winning bid. Correct losing bidders forfeit no money. Only the winning bidder can collect the item bid upon.

Detailed Description Text (58):
Server S.sub.i chooses the winning bid from among the remaining bids first by agreeing on the set that pass the validity check and then by following the public rule for determining the winner. Once the winning bidder at bidding terminal B is determined, S.sub.i executes the multicast denoted by 414 where denotes a point-to-point send over a (not necessarily authenticated) communication channel. This message conveys that S.sub.i declares bidder at bidding terminal B the winner of auction aid. Such messages from t+1 servers, i.e., all correct servers, can collectively serve as winning bidder's ticket for claiming the auctioned item. Therefore, only the winning bidder obtains t+1 signed declarations (from t+1 different auction servers) stating that it won the auction and only the winning bidder can collect the item bid upon, supposing that possession of t+1 such declarations is necessary to do so.

Detailed Description Text (68):
The preferred embodiment of the present invention provides the design and implementation of a practical distributed auction service that can tolerate the malicious behavior of fewer than one-third of its servers and any number of bidders. Our design of auction system 100 is based on several cryptographic primitives, both old (multicast, secret sharing, digital cash) and new (verifiable signature sharing). The implementation of this service suggests that this approach performs sufficiently well to be useful in a wide range of settings.

CLAIMS:

3. The method as defined in claim 1, wherein said determining step follows a public auction service rule.

11. A method for making transactions in a service network having a plurality of

servers and a plurality of remote stations connected to said servers, said transactions being subject to distributed protocols, said method comprising:

submitting offers from said remote stations to said servers by:

i. encoding each of said offers into a plurality of shares utilizing said distributed protocols;

ii. individually distributing said shares of each of said offers among said servers;

reconstructing at said servers portions of said offers by utilizing said distributed protocol;

verifying collectively among said servers the validity of said portions of said offers;

accepting collectively among said servers at least one of said verified offers based on a predetermined rule;

wherein said distributing step includes the steps of sending public information to said servers and sending private keys to appropriate servers; and

wherein said verifying step includes the step of evaluating consistency of said decrypted share with said public information.

☐ ▮ Generate Collection ▮   ▮ Print ▮

      L11: Entry 45 of 45   File: USPT   Mar 28, 2000

US-PAT-NO: 6044363
DOCUMENT-IDENTIFIER: US 6044363 A

TITLE: Automatic auction method

DATE-ISSUED: March 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Ogura; Masahiro	Sakura			JP
Takeshima; Masahiro	Tokyo			JP
Arai; Kenji	Tokyo			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 08/ 916154   [PALM]
DATE FILED: September 2, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	8-233918	September 4, 1996

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/37; 705/8, 705/26, 705/27, 705/37, 705/38, 395/286
US-CL-CURRENT: 705/37; 705/26, 705/27, 705/38, 705/8, 710/106

FIELD-OF-SEARCH: 705/37, 705/26, 705/27, 705/38, 395/286

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

▮ Search Selected ▮   ▮ Search ALL ▮   ▮ Clear ▮

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	5136501	August 1992	Silverman et al.	705/38

☐	<u>5689652</u>	November 1997	Lupien et al.	705/37
☐	<u>5826244</u>	October 1998	Huberman	705/37
☐	<u>5835896</u>	November 1998	Fisher et al.	705/37
☐	<u>5890138</u>	March 1999	Godin et al.	705/26
☐	<u>5905974</u>	May 1999	Fraser et al.	705/37
☐	<u>5905975</u>	May 1999	Ausubel	705/37

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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eBay Inc, Proxy Bidding, http://pages.ebay.com/aw/help/help-t-bid-prxy.html, 1995.
eBay Inc, Bidding, http://pages.ebay.com/aw/nut-bid4.html, 1995.

ART-UNIT: 274

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Nguyen; Nga B.

ATTY-AGENT-FIRM: Beall Law Offices

ABSTRACT:

In automatic auction method which makes it unnecessary for bidders to stay before auction terminals at the time of auction and which makes possible auction transactions on an open network on which it is difficult to assure the on-line and real time properties, a plurality of auction ordering information pieces each containing a desired price, number of purchase, and a highest possible price in competition for the desired price and received from bidder terminals via on-line circuits are collected. Until an auction issue appears, the price is lowered. If there is at least one auction issue and a desired quantity which is the sum total of the numbers of purchase of the auction issues is not satisfied, then it is determined whether there is an auction issue coinciding in price by comparing the set price with (the desired price+the highest possible price in competition). Until the desired quantity is satisfied, the price is raised.

16 Claims, 20 Drawing figures

□ ▒▒▒ Generate Collection ▒▒▒   Print

L11: Entry 45 of 45   File: USPT   Mar 28, 2000

DOCUMENT-IDENTIFIER: US 6044363 A
TITLE: Automatic auction method

Drawing Description Text (6):
FIG. 5 is an auction rule editor in an embodiment of the present invention;

Detailed Description Text (29):
If the ordering button 221 on the product information screen 21 shown in FIG. 3 is
pressed, an auction condition input editor 31 shown in FIG. 4 appears. In the
auction condition input editor 31, a purchasing person ID 311 representing a bidder
and an ordering product number 312 are displayed. As the purchasing person ID, the
electronic mail address and other specific identifiers, for example, of the
purchasing person can be used. As for the product number 312, the product number
211 of the product selected on the screen of FIG. 3 is automatically stored. A rule
list 313 forms a part of the auction ordering information sent to the electronic
marketplace server 11. The rule list 313 includes a desired auction price which is
a purchase condition of the product, a purchase amount, and a maximum allowed price
in competition for the desired price. For example, the representation "purchase 80
boxes at .Yen.90 (+.Yen.2)" in FIG. 4 indicates that the desired auction price
is .Yen.90, the maximum allowed price in competition is +.Yen.2, and the purchase
amount is 80 boxes. In other words, the purchasing person desires to buy the
product at .Yen.90, but up to .Yen.92 can be paid in the case of competition with
another purchasing person. A field 314 is information specifying whether the
purchasing person will participate in the auction after the purchasing person has
conducted a successful bid once.

Detailed Description Text (30):
A new rule registration button 321, a rule correction button 322, a rule deletion
button 323, a rule priority raising button 324, a rule priority lowering button
325, a button 326 for transmitting the auction ordering information to the
electronic marketplace server 11, and a button 327 for suspending the auction
ordering information creation are icons displayed on the screen.

Detailed Description Text (31):
If the purchasing person presses the new registration button 321, or selects one of
the rules displayed in the rule list 313 and thereafter presses the correction
button 322, a rule editor shown in FIG. 5 is displayed and rule
generation/correction is conducted. The rule editor 41 may be displayed by
switching from the auction condition input editor 31, or on the same screen by
using the multi-window technique.

Detailed Description Text (32):
In the rule editor 41, a field 411 is used to select a price input method. Either
the case where a price is specified or the case where the purchase at the lowest
price is desired is specified. A field 412 located in the vicinity thereof is a
field for inputting a price in the case where a price is specified. A field 413 is
used to input a maximum allowance in competition. A field 421 is used to select an
amount input method serving as a condition of the purchase amount. Three

specification methods are prepared: all amount purchase, fixed amount purchase, and range designation purchase. The all amount purchase specifies the purchase of the all purchasable amount in the auction. The fixed amount purchase specifies the purchase of a predetermined fixed amount. The range designation purchase specifies the purchase amount by using a range. Furthermore, in the vicinity of the field 421, a field 422 used to input the amount in the case of the fixed amount purchase and fields 423 and 424 used to input the range in the case of the range designation purchase are provided. A field 425 is used to specify whether a purchase is effected even if the available amount is less than the desired amount. Furthermore, on the screen, two icons, i.e., a button 431 for registration into the rule list, and a button 432 for suspending the rule generation/correction on the way, are displayed.

Detailed Description Text (33):
In the case where a rule is to be generated/corrected, it can be conducted by inputting the price condition to the fields 411 through 413, inputting the amount condition to the fields 421 through 425, and pressing a registration button 431. In the case where a rule is to be suspended on the way, the suspension button 432 is pressed.

Detailed Description Text (35):
A generated rule can be deleted by using the deletion button 323. The generated rules are evaluated in the order shown in the rule list 313. For changing their priorities, therefore, priority change buttons 318 and 319 are used.

Detailed Description Text (36):
By pressing the transmission button 326, auction ordering information is transmitted to the electronic marketplace server 11 and participation in the auction is registered. The auction ordering information thus transmitted contains at least the rule list 313 and a flag added thereto to specify whether the purchasing person participates in the auction once a successful bid has been conducted. The transmission of the auction ordering information at this time can be implemented by using the function of the known browser, for example, such as Netscape Navigator 3.0 produced by Netscape, Inc. In the case where a registration number, registration time, and the like are transmitted from the electronic marketplace server 11 after completion of the registration, they may be displayed on the output device 123 or they may be stored in the storage device 124. The registration number transmitted from the electronic marketplace server 11 may be used as an inquiry key for the electronic marketplace server 11 in the future. In the case where the participation in the auction is to be passed up, the suspension button 327 is pressed and the auction ordering information creation is terminated.

Detailed Description Text (39):
In the case where the auction result is to be displayed, a subject ordering product is selected out of the ordering product list 511 and the result display button 514 is pressed. Thereupon, an auction result screen 61 shown in FIG. 7 appears. The auction result screen 61 includes a successful bid result 611, a transaction process 612, a rule result 613 contained in the auction ordering information, and a button 614 for closing the screen.

Detailed Description Text (42):
In the rule results 613, the behavior of rules contained in the auction ordering information at the time of the auction are included. In the case where a successful bid has been conducted, the behavior at the time of the auction includes the hammer price and the successful bid amount. In the case where a successful bid has not been conducted due to a competition, the behavior at the time of the auction includes failed prices. In the case where a rule has not been used, the fact is included in the behavior.

Detailed Description Text (61):

For all <u>rules</u> held by a subject purchasing person excepting <u>rules</u> fired once, operations as far as step 1204 are repeated (step 1202). Here, "firing" means participating in the auction, and means the case where the set price of the auction coincides with the desired auction price or the case where the set price of the auction is contained in the highest possible price for the desired auction price.

<u>Detailed Description Text</u> (62):
If the current price is greater than the sum of the specified price of the subject <u>rule</u> and the highest possible price in competition in the competitive state and if the current price is greater than the specified price of the subject <u>rule</u> in the noncompetitive state, the processing proceeds to step 1204. Otherwise, the processing proceeds to step 1207 (step 1203).

<u>Detailed Description Text</u> (63):
If the current price is greater than the specified price of the subject <u>rule,</u> then the step 1203 is repeated until all <u>rules</u> held by the purchasing person excepting fired <u>rules</u> are finished (step 1204). If the repetitive processing is finished, the subject purchasing person is excluded from purchase desiring purchasing persons (step 1205). Until the loop condition of the step 1201 is finished, the processing is repeated (step 1206).

<u>Detailed Description Text</u> (64):
If the current price is less than the specified price of the subject <u>rule</u> at the step 1203, a minimum desired amount and a maximum desired amount are set on the basis of the subject <u>rule</u>. In other words, if the amount specification of the subject <u>rule</u> is all amount purchase, the minimum desired amount is set equal to 0 and the maximum desired amount is set equal to the remaining quantity. If the amount specification of the subject <u>rule</u> is fixed amount purchase, the minimum desired amount is set equal to a specified amount and the maximum desired amount is set equal to a specified amount. If the amount specification of the subject <u>rule</u> is range designation purchase and its upper limit value is not prescribed, then the minimum desired amount is set equal to its lower limit value and the maximum desired amount is set equal to the remaining quantity. If the amount specification of the subject <u>rule</u> is range designation purchase and its lower limit value is not prescribed, then the minimum desired amount is set equal to 0 and the maximum desired amount is set equal to its upper limit value. If the amount specification of the subject <u>rule</u> is range designation purchase and both its upper limit value and its lower limit value are not prescribed, then the minimum desired amount is set equal to the lower limit value and the maximum desired amount is set equal to the upper limit value (step 1207).

<u>Detailed Description Text</u> (65):
It is determined whether the remaining quantity is less than the minimum desired amount set at the step 1207. If the remaining quantity is less than the minimum desired amount, then the processing proceeds to the step 1204. If the remaining quantity is greater than the minimum desired amount, then the processing proceeds to step 1209 (step 1208). The subject purchasing person is set to a purchase desiring purchasing person, and the firing <u>rule</u> is set to a subject <u>rule</u> (step 1209).

<u>Detailed Description Text</u> (67):
Among the purchase desiring purchasing persons each having a nonzero desired amount, some persons do not purchase according to the amount condition of the firing <u>rule</u> if the amount is less than the minimum desired amount. The sum total (sum total 1) of the minimum desired amounts of such purchase desiring purchasing persons is calculated (step 1303).

<u>Detailed Description Text</u> (68):
If the remaining quantity is less than the sum of the sum total 2 derived at the step 1303, the number of purchase desiring purchasing persons each having a minimum

desired amount equal to zero, and the number of purchase desiring purchasing persons who are included in the purchase desiring purchasing persons each having a nonzero minimum desired amount and who purchase even if the amount is less than the minimum desired amount according to the amount condition of the firing rule, then the state is judged to be a competitive state and the judging routine is finished. Otherwise, the processing proceeds to step 1305 (step 1304).

Detailed Description Text (69):
For the purchase desiring purchasing persons who are included in the purchase desiring purchasing persons each having a nonzero minimum desired amount and who purchase even if the amount is less than the minimum desired amount according to the amount condition of the firing rule, the minimum desired amount is set equal to 0. The state is judged to be an allocatable state, and the judging routine is finished (step 1305).

Detailed Description Text (76):
The minimum desired amount is allotted to the subject purchasing person, and the remaining quantity is decreased by the minimum desired amount (step 1504). If the amount specification of the firing rule of the subject purchasing person is not the fixed amount purchase, then the processing proceeds to the step 1506. In the case of the fixed amount purchase, the processing proceeds to the step 1507 (step 1505). The subject purchasing person is set to a variable amount purchasing person (step 1506).

Detailed Description Text (77):
Until the above described condition of the loop 1 is finished, the processing beginning from the step 1501 is repeated (step 1507). At step 1508, the processing proceeds to step 1509, in the case where the subject purchasing person purchases according to the firing rule of the subject purchasing person even if the amount is less than the desired amount. In the case where the subject purchasing person does not purchase, the processing proceeds to step 1507. All of the remaining quantity is allotted to the subject purchasing person (step 1509), and the processing is finished.

Detailed Description Text (82):
FIG. 19 shows a condition 2010 in the automatic auction. FIG. 20 shows "registered purchasing persons and their auction ordering information" 2020. In the auction condition 2010, the quantity, initial price, increment of descending price, lowest price, increment of ascending price in competition, and highest ascending price are included. For each of the registered purchasing persons, the "registered purchasing persons and their auction ordering information" 2020 includes an auction rule and a flag indicating whether the registered purchasing person participates in the auction after the person has conducted a successful bid once.

Detailed Description Text (85):
A rule 2021 of a purchasing person A is fired. In other words, the purchasing person A appears as the purchase desiring purchasing person who coincides with the price condition (.Yen.95). While the remaining quantity is 200 boxes, the desired quantity of the purchasing person A is 60 boxes. At this time, therefore, a competition does not occur. Accordingly, the desired amount of 60 boxes is allotted to the purchasing person A, and the remaining quantity is set to 140 boxes. As for the auction reopening price, the successful bid price .Yen.95, a price .Yen.94 next to the successful bid price, or a price raised by a constant ratio may be used. It is now assumed that the auction is reopened with the successful bid price.

Detailed Description Text (86):
The price is lowered by the predetermined increment of descending price (.Yen.1). Even when the price has been lowered to .Yen.91, there are no purchasing persons desiring the purchase. Therefore, the price is further lowered. The rule 2021 of the purchasing person A does not become the subject of the evaluation, because its

transaction has already been settled.

Detailed Description Text (87):
A <u>rule</u> 2022 of a purchasing person B and a <u>rule</u> 2023 of a purchasing person C are
fired. As the purchase desiring purchasing person, the purchasing person B and the
purchasing person C appear. While the remaining quantity is 140 boxes, the desired
quantities are 100 boxes and 80 boxes, respectively. Since the total desired
quantity is thus 180 boxes, a competition occurs. By raising the price by the
predetermined increment of ascending price in competition (.Yen.1), therefore, the
competition is eliminated.

Detailed Description Text (88):
The highest possible price in competition is .Yen.2 in the <u>rule</u> 2022 of the
purchasing person B. The highest possible price in competition is .Yen.4 in the
<u>rule</u> 2023 of the purchasing person C. Even if the price is raised to .Yen.91, and
then .Yen.92, therefore, both the purchasing person B and the purchasing person C
desire the purchase. As a result, the competition does not vanish, and the price is
further raised.

Detailed Description Text (89):
The raised price exceeds the highest possible price in competition (+.Yen.2) in the
<u>rule</u> 2022 of the purchasing person B. Therefore, the purchasing person B gives up
the purchase, and the competition is vanished. As for the purchasing person C, the
raised price is within the highest price in competition (+.Yen.4) in the <u>rule</u> 2023
of the purchasing person C. At the price within the range of purchase desire,
therefore, the transaction is settled. As a result, the desired quantity of 80
boxes is allotted to the purchasing person C, and the remaining quantity becomes 60
boxes.

Detailed Description Text (91):
Since there are no purchasing persons desiring the purchase at .Yen.89, the price
is further lowered. Thereupon, a <u>rule</u> 2024 of a purchasing person D is fired, and
the purchasing person D appears as the purchasing person desiring the purchase.
While the remaining quantity is 60 boxes at this time, the minimum desired amount
is 50 boxes. Therefore, a competition is not caused. The minimum desired amount of
50 boxes is first allotted to the purchasing person D, and the purchasing person D
is set as the variable amount purchasing person. Since the remaining quantity is 10
boxes, the remaining quantity of 10 boxes is allotted to the purchasing person D
which is the variable amount purchasing person. As a result, the purchasing person
D purchases 60 boxes. Accordingly, the remaining quantity becomes 0 boxes, and the
auction is finished.

Detailed Description Text (92):
In the present embodiment, the purchasing person client 12 registers <u>rules</u>
concerning the auction into the electronic marketplace server 11 as the auction
ordering information. The electronic marketplace server 11 conducts the auction on
the basis of the auction ordering information. Therefore, it becomes unnecessary
for the purchasing person client 12, i.e., the bidder, to stay before the auction
terminal at the .time of the auction.

Detailed Description Text (93):
By making the <u>rule</u> include the purchase conditions, it becomes possible to
automatically and flexibly cope with the situation change at the time of the
auction. Thus the on-line and real time properties are not necessarily required. As
a result, auction transactions become possible on an open network on which it is
difficult to assure the on-line and real time properties.